

THE IMPACT OF THE NEWLY PROPOSED PASS CUT SCORES ON PROFICIENCY RATES AND SCHOOL AYP OUTCOMES

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The Northwest Evaluation Association has published a series of studies examining the difficulty of the cut scores established for the Palmetto Achievement Challenge Test (PACT), used in South Carolina to measure student proficiency. These studies have linked the PACT proficiency cut scores for reading and math in grades three through eight onto the scale of NWEA's Measures of Academic Progress (or MAP) assessments, permitting NWEA to estimate the difficulty of South Carolina's proficiency standards relative to its own normative studies (Cronin, 2007). Additional studies also compared the difficulty of South Carolina's proficiency standards (Cronin, Dahlin, Adkins, & Kingsbury, 2007) and NCLB accountability rules (Cronin, Dahlin, Xiang, & McCahon, 2009) relative to those adopted within 27 other states.

NWEA was recently asked to conduct a series of analyses estimating the impact of a proposed set of cut scores for South Carolina's new state assessment, PASS. The proposed cut scores for the "Met" performance levels at each grade 3 through 8 are shown in Tables 1 and 2 for reading and mathematics, respectively.

TABLE 1. PROPOSED CUT SCORES FOR READING AND RESEARCH

| Grade Level of PASS Reading/ Research Test | PACT Scale Score Corresponding to Lower Bound of PASS "Met" Performance |
|--|---|
| 3 | 300 |
| 4 | 398 |
| 5 | 499 |
| 6 | 596 |
| 7 | 696 |
| 8 | 797 |

TABLE 2. PROPOSED CUT SCORES FOR MATHEMATICS

| Grade Level of PASS Mathematics Test | PACT Scale Score Corresponding to Lower Bound of PASS “Met” Performance |
|--------------------------------------|---|
| 3 | 299 |
| 4 | 403 |
| 5 | 502 |
| 6 | 600 |
| 7 | 701 |
| 8 | 800 |

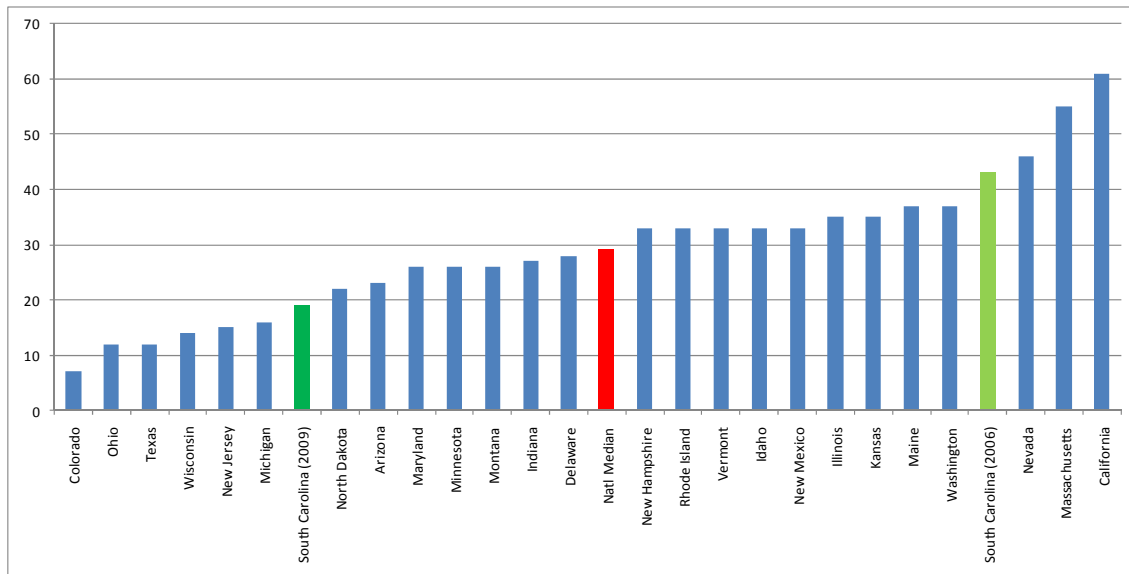
The newly proposed cut scores all fall within the range previously designated as “basic” level performance on PACT, in some cases falling precisely at the lower bound of the former basic range and in other cases, slightly higher. Information from NWEA’s 2007 study linking PACT scores onto the MAP scale (Cronin, 2007) were used to estimate the MAP scale scores corresponding to these new PASS cut scores, and to compare these standards to those within other states.

DIFFICULTY OF THE OLD AND NEW PROFICIENCY CUT SCORES RELATIVE TO OTHER STATES

In 2007, NWEA published a study entitled, “The Proficiency Illusion”, examining the relative difficulty of the reading and math proficiency standards within 27 states for grades three through eight. Figures from this earlier study are reproduced within the following pages, showing the relative difficulty of the older PACT proficiency standards. The proposed PASS cut scores have also been added to these figures so that their difficulties can be compared to the other states examined in that prior study.

Figure 1, reproduced from the Proficiency Illusion (Cronin, Dahlin, Adkins, & Kingsbury, 2007), ranks the difficulty of third grade reading standards in South Carolina’s and 26 other states, relative to NWEA norms. In this figure, higher bars denote more difficult proficiency standards. The red bar denotes the median difficulty level among the states examined within the study. This figure shows that the PACT proficiency standards for third grade reading (the light green bar) ranked among the most difficult of the 27 states examined within The Proficiency Illusion, falling below only three other states. The newly proposed PASS cut score for third grade reading is also shown (dark green bar), falling roughly midway between the median and the easiest state proficiency standards.

FIGURE 1: RANKINGS OF PROFICIENCY CUT SCORES FOR GRADE 3 READING



Figures 2, 3, and 4 provide similar information for eighth grade reading, third grade math, and eighth grade math, respectively. In all cases, the findings are similar: Proficiency cut scores under PACT were at or among the most difficult of all states examined, while the newly proposed PASS cut scores are much lower, falling roughly among the lowest one fourth of states examined.

FIGURE 2: RANKINGS OF PROFICIENCY CUT SCORES FOR GRADE 8 READING

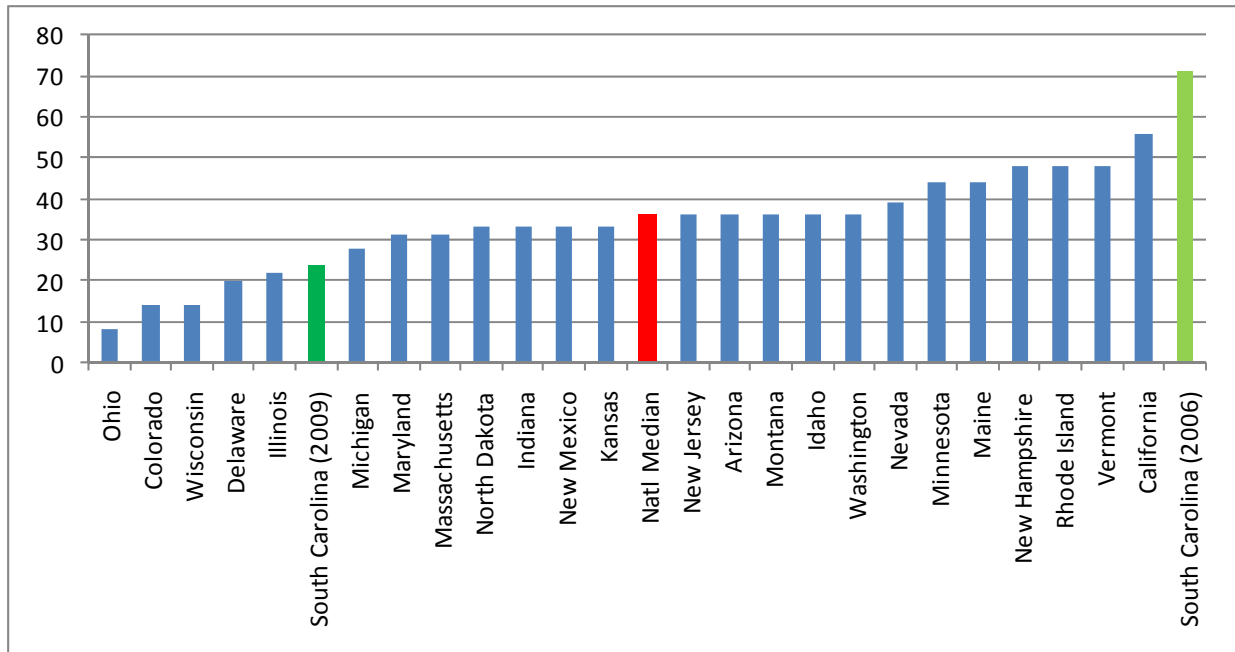


FIGURE 3: RANKINGS OF PROFICIENCY CUT SCORES FOR GRADE 3 MATH

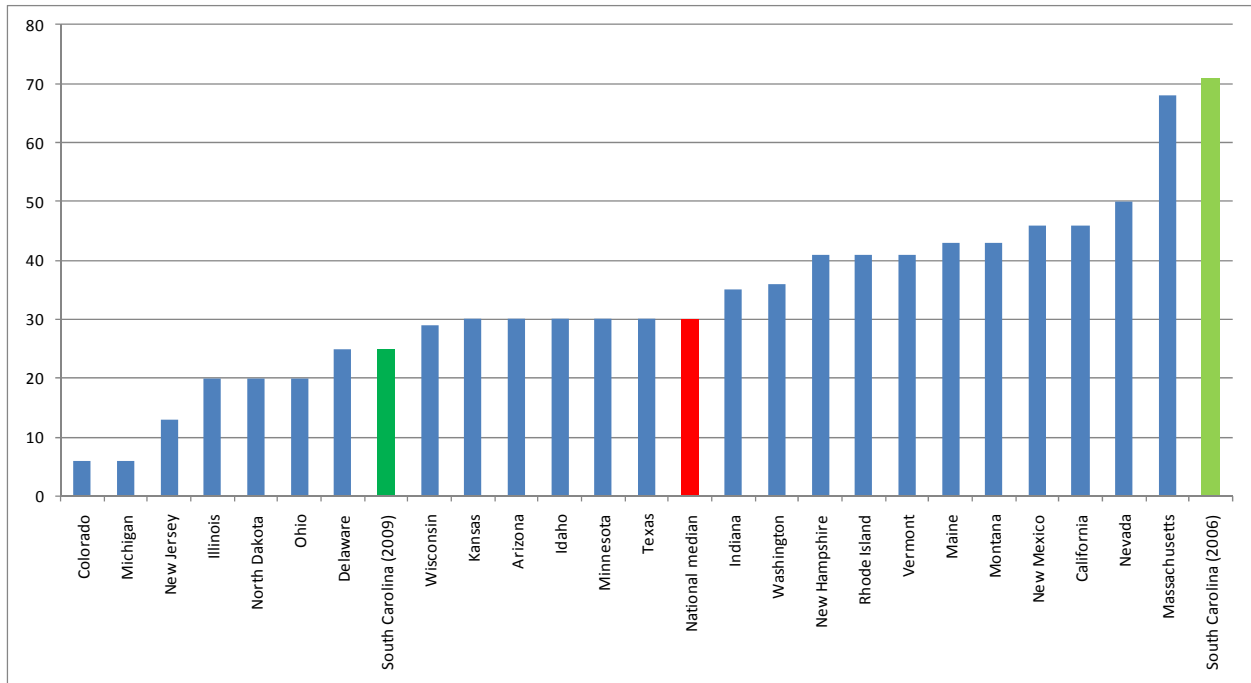
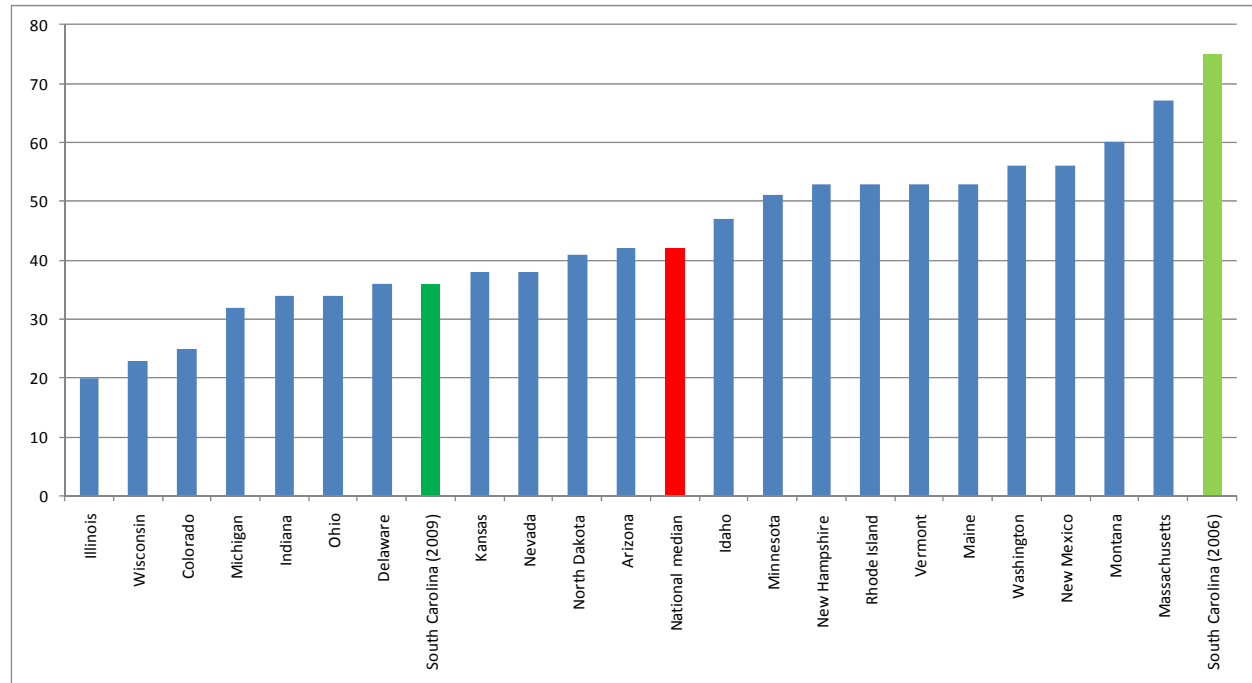


FIGURE 4: RANKINGS OF PROFICIENCY CUT SCORES FOR GRADE 8 MATH



IMPACT OF THE NEW PASS CUT SCORES ON AYP PERFORMANCE

As Figures 1 through 4 illustrate, the newly proposed PASS cut scores are less difficult than those used with PACT, and are relatively easy compared to the majority of other states examined within The Proficiency Illusion. And while testing standards certainly influence school level AYP outcomes, the rules and policies outlined in South Carolina's NCLB accountability plan largely determine whether schools make AYP. In other words, proficiency standards are only part of the story. Even if the state adopts easier proficiency cut scores, schools may still struggle to make AYP if the accountability rules are relatively difficult (e.g., annual measurable objectives are high, minimum sub-group sizes are low, confidence intervals are not used, etc.) compared to the rules in other states.

Earlier this year, NWEA published a study examining the accountability rules outlined within South Carolina's NCLB accountability plan, as well as 26 other states, to examine how these rules interacted with proficiency standards to affect AYP outcomes for a sample of 18 elementary and 18 middle schools (Cronin, Dahlin, Xiang, McCahon, 2009). NWEA test scores and sub-group information were available for nearly the entire population of students within these schools, making it possible to estimate AYP outcomes for these schools as if they were located in South Carolina rules and 26 other states. Although the sample schools varied across a number of factors including population size, location, and socioeconomic status, the same sample of schools was evaluated for every state. These analyses made

it possible to directly compare the relative difficulties of South Carolina's and the 26 other states' NCLB accountability rules.

Figure 5 is recreated from this study, and shows how many of the 18 sample elementary schools would have made AYP in each of the 27 states, under the 2008 accountability rules (e.g., annual measurable objectives, minimum subgroup sizes, proficiency standards, policies on confidence intervals/standard errors of measure, etc.). On the left side of the figure, only two of the sample schools would have made AYP in Massachusetts and Nevada, whereas 15 of the 18 schools would have made AYP under the Arizona accountability rules and standards. Shown in dark green, it can be seen that under South Carolina rules, three of the sample elementary schools would have made AYP. The light green bar estimates how many of the sample schools would have made AYP using the easier proficiency standards proposed for PASS, with five of the sample elementary schools making AYP. The number of sample elementary schools making AYP would increase from 3 to 5 using the easier PASS standards, but under either scenario, South Carolina would be somewhere near the middle of the pack, compared to other states examined.

FIGURE 5: ELEMENTARY SCHOOLS

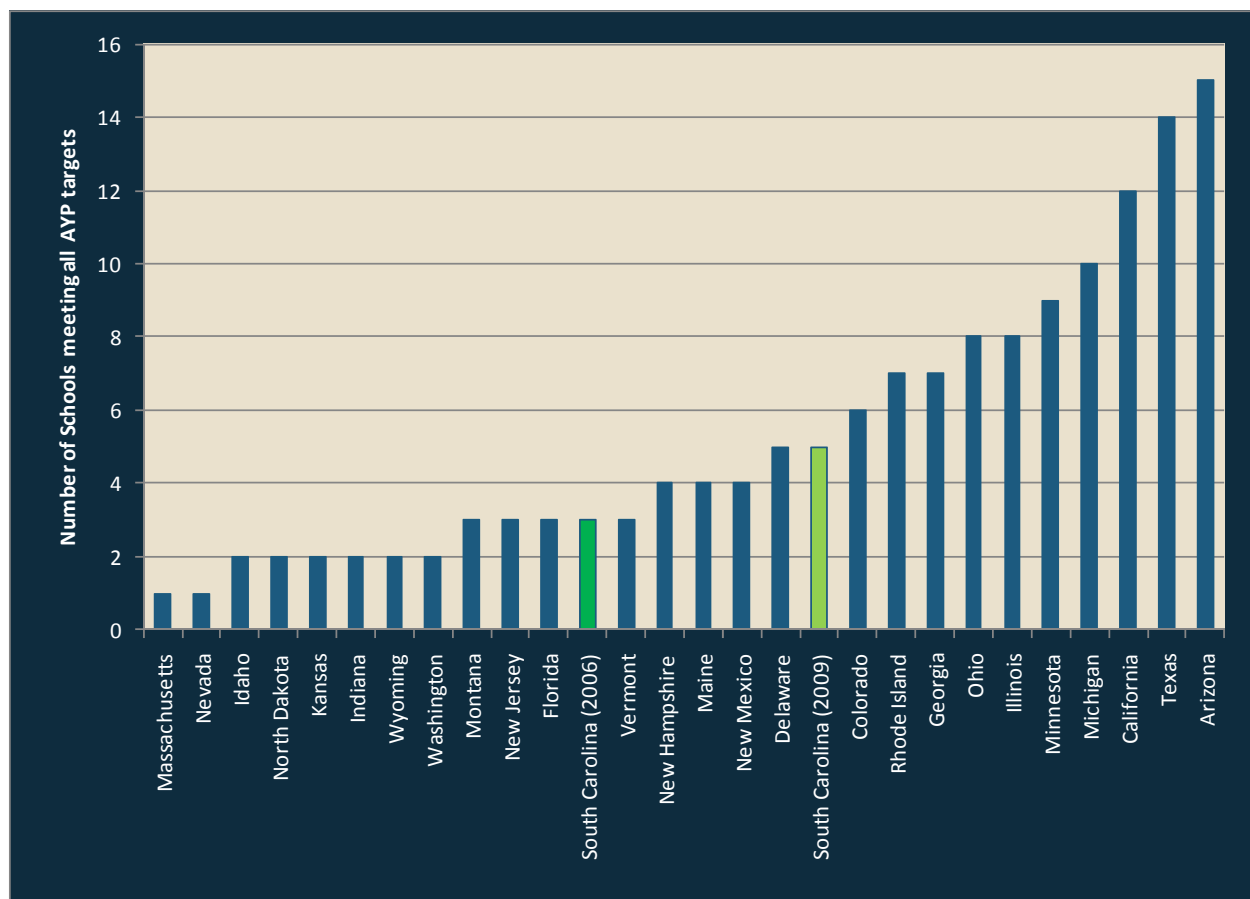
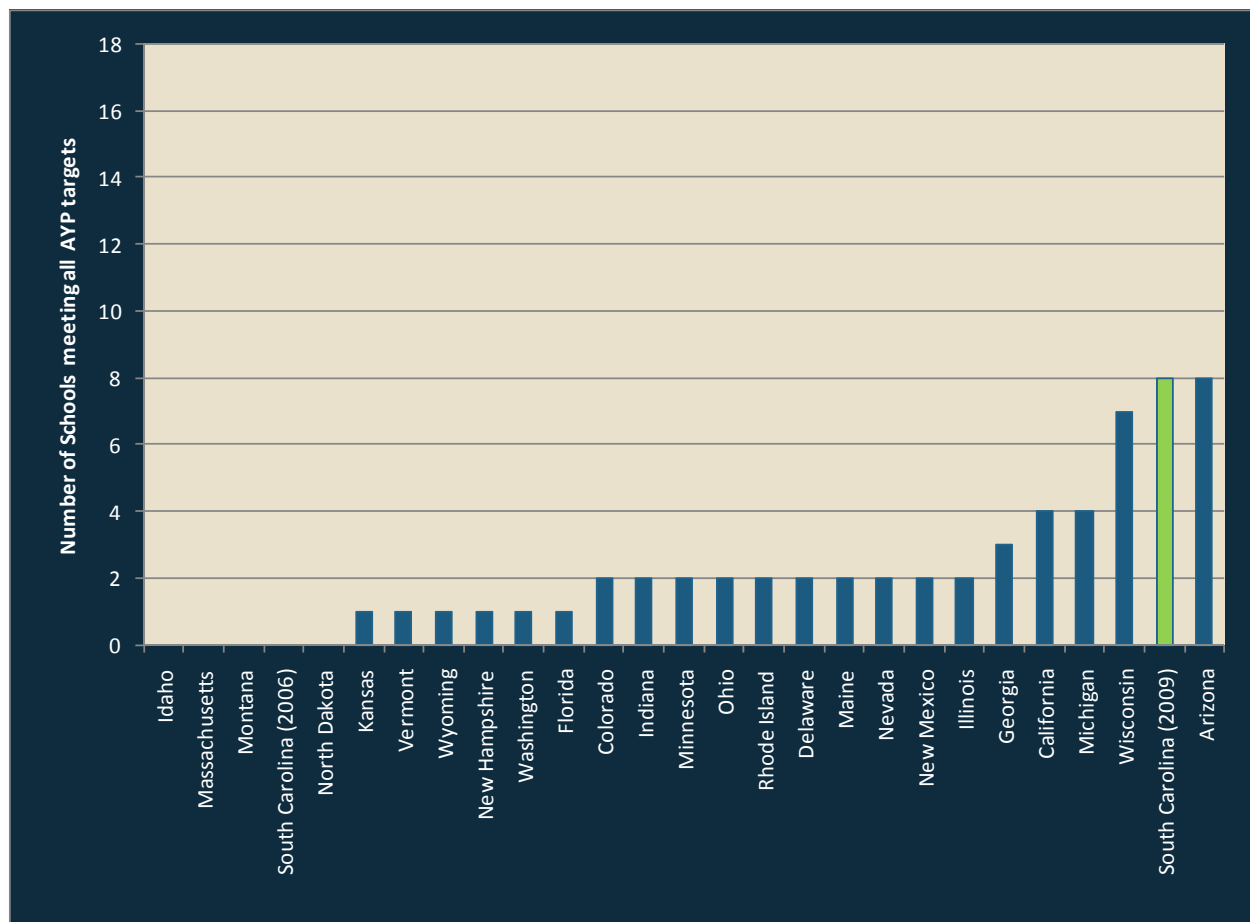


Figure 6 shows the number of middle schools within the study sample that would have made AYP, and here the difference between PACT and PASS standards has a much more profound impact. In the original study (using PACT), none of the 18 sample middle schools would have been projected to make AYP under South Carolina accountability rules, placing South Carolina among the states with the most strict middle school accountability. Using the easier PASS standards (light green), however, 8 of 18 sample middle schools would be projected to make AYP. This is more than any other state examined except for Arizona, which also showed 8 passing middle schools.

FIGURE 6: MIDDLE SCHOOLS



IMPACT OF THE NEW PASS CUT SCORES ON THE PERCENTAGES OF STUDENTS MEETING PROFICIENCY STANDARDS

Figures 7 through 10, also adapted from *The Accountability Illusion*, illustrate how changes in proficiency standards are likely to impact the percentages of students within a school meeting those standards.

Each bar in Figure 7 shows range of reading performance for the same sample of 18 elementary schools in 28 states, each with its own set of proficiency standards (non-South Carolina bars are rendered semi-transparent for clarity of illustration). South Carolina is represented twice, once under the PACT standards and once under the proposed PASS standards. The bottom of each bar shows the percentage of students who met standards in the lowest performing school, while the upper end shows the proficiency rate at the highest performing sample school. The mid-point represents the percentage proficient in the median sample school, while the orange triangles denote the 2008 annual measurable objective for that state. Under PACT (the leftmost bar), the lowest performing sample school would have attain roughly 16% reading proficiency, the median school would have achieved 50% proficiency, and the highest performing elementary school would achieve roughly 77% reading proficiency. These same schools are analyzed under the easier PASS standards (on the right side of the figure), demonstrating much higher performance: the same school that achieved only 16% proficiency under PACT would achieve roughly 60% proficiency under the new PASS standards, and the high performing school would improve from 77% to roughly 98% of students meeting standards.

FIGURE 7: RANGE OF READING PROFICIENCY RATES FOR A COMMON SAMPLE OF 18 ELEMENTARY SCHOOLS

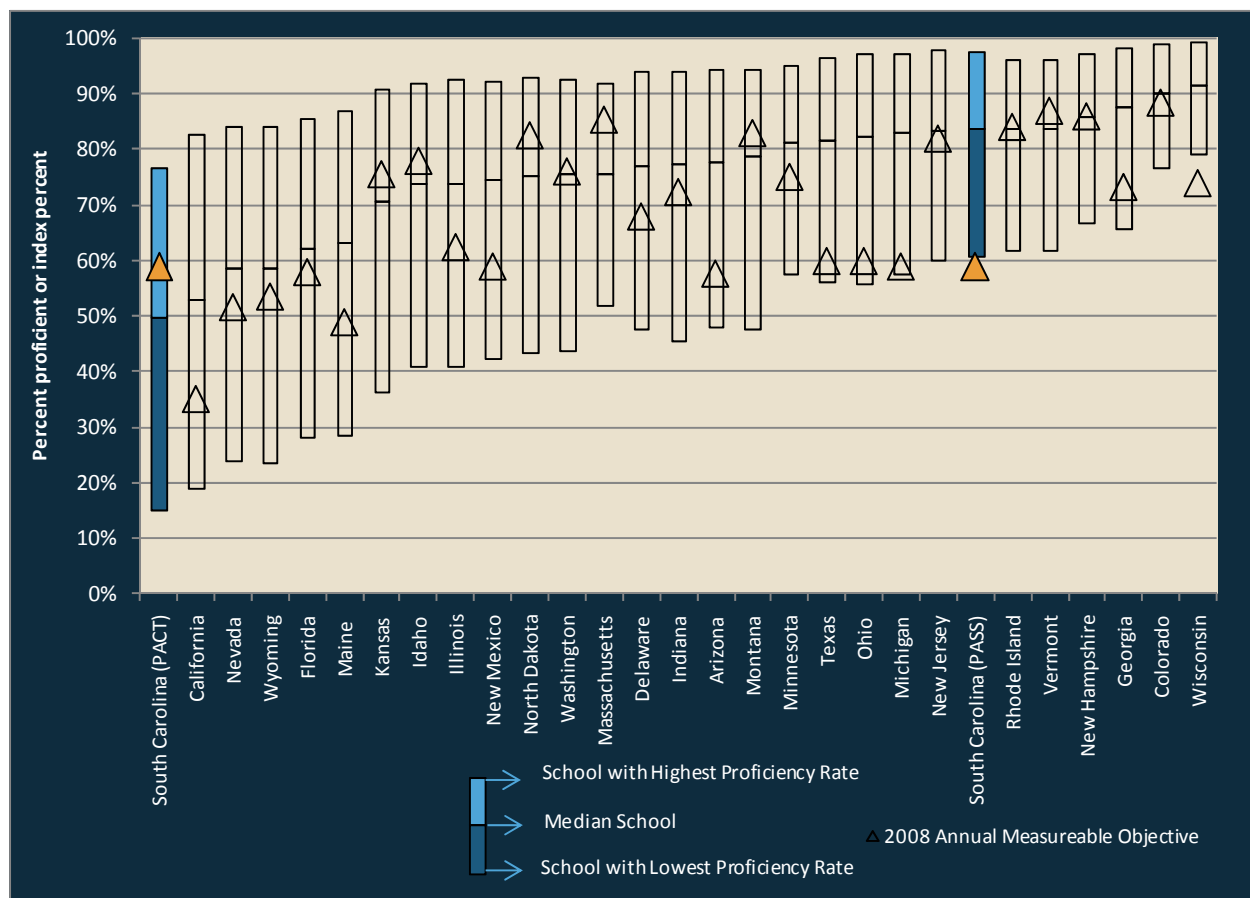


Figure 8 conveys similar information about the mathematics proficiency rates across the same 18 elementary schools when evaluated under differing proficiency standards. The lowest performing school achieved roughly 18% proficiency under PACT, but that same school would achieve roughly 64% proficiency under the new PASS standards. Note, too, that while the majority of schools would fail to achieve the 2008 annual measurable objective (roughly 58%, as denoted by the orange triangle) for the overall population under PACT, every single school within our sample would meet that objective for the overall population under the lower PASS standards.¹

FIGURE 8: RANGE OF MATH PROFICIENCY RATES FOR A COMMON SAMPLE OF 18 ELEMENTARY SCHOOLS



¹ For this analysis, only the overall population was examined. Some schools still could have failed to meet the annual measurable objective for every sub-group.

Figures 9 and 10 show comparable information for a sample of 18 middle schools, and similar patterns are visible with respect to PACT and PASS. While only the highest performing sample middle schools would meet the Overall 2008 Annual Measurable Objective under the PACT standards, every school within the sample would meet the overall objective under the lower PASS standards. Nearly 70% of the students in the lowest performing middle school would meet reading standards under PASS, when only 17% of those same students would have been proficient under PACT. In math, the median sample school would achieve roughly 38% proficiency under PACT, while over 80% of those same students would meet the newly proposed PASS standards.

FIGURE 9: RANGE OF READING PROFICIENCY RATES FOR A COMMON SAMPLE OF 18 MIDDLE SCHOOLS

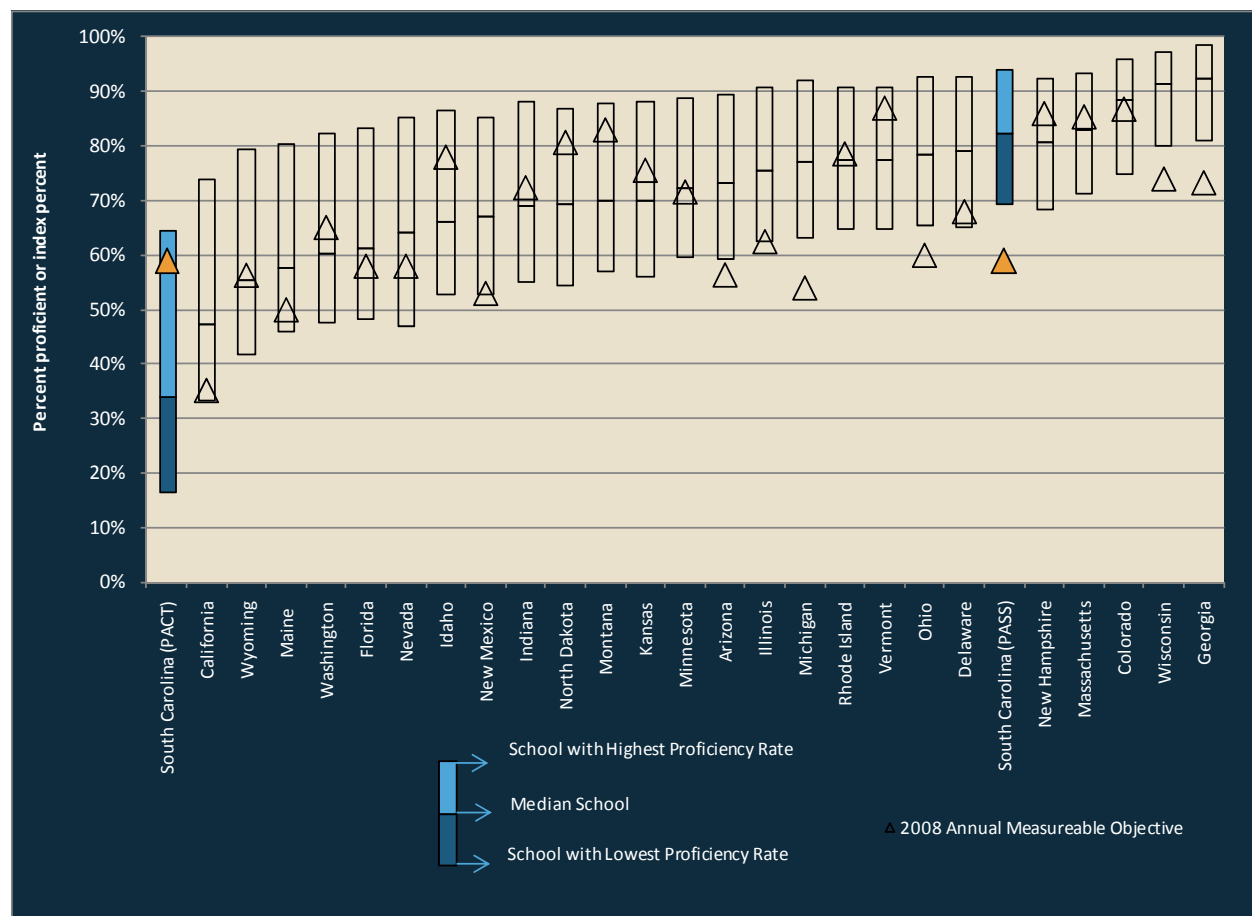
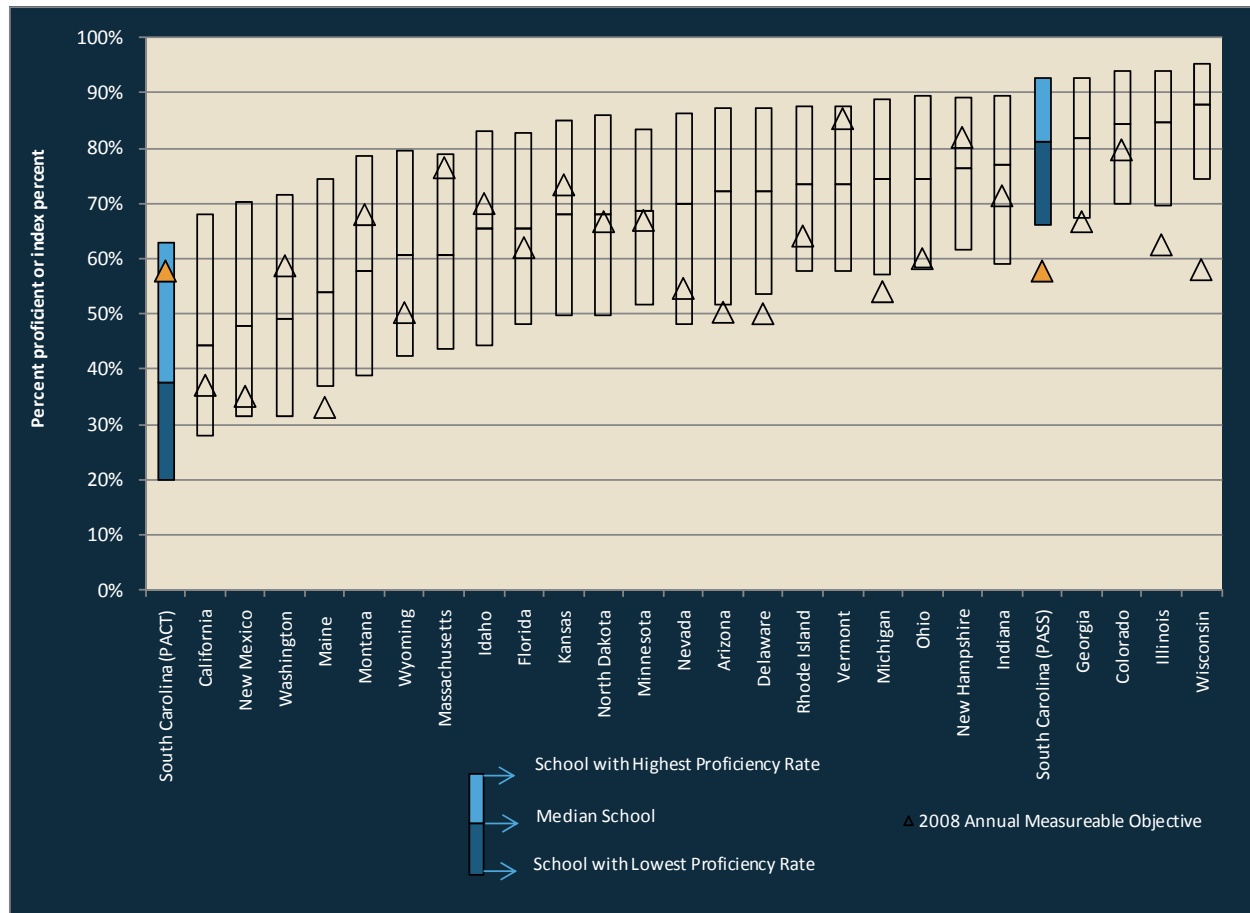


FIGURE 10: RANGE OF MATH PROFICIENCY RATES FOR A COMMON SAMPLE OF 18 MIDDLE SCHOOLS



SUMMARY OF FINDINGS

The proposed cut scores under PASS are significantly easier than the previous cut scores used with PACT. Whereas the older PACT standards were among the highest in the nation, the newly proposed PASS standards would rank among the bottom quartile in a recent cross-state comparison of proficiency standards within 27 states. Use of these lower standards would result in dramatic increases in the percentages of students meeting standards in South Carolina schools, even with no actual improvement in student performance. An analysis of South Carolina's NCLB accountability rules, in conjunction with the newly proposed standards, suggests that there would be a moderate increase in the number of elementary schools making AYP and a more significant increase in the number of middle schools making AYP.

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